| 0 | For receiving Office use only | |
|-------------------|---|---|
| 0-1 | International Application No. | |
| 0-2 | International Filing Date | |
| 0-3 | Name of receiving Office and "PCT International Application" | |
| 0-4 | Form PCT/RO/101 PCT Request | |
| 0-4-1 | Prepared Using | PCT-SAFE [EASY mode] Version 3.50 (Build 0002.163) |
| 0-5 | Petition The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty | |
| 0-6 | Receiving Office (specified by the applicant) | United States Patent and Trademark Office (USPTO) (RO/US) |
| 0-7 | Applicant's or agent's file reference | 126457.02102 |
| Ī | Title of Invention | PROCESS FOR REMOVING MICROBUBBLES FROM A |
| 11 | Applicant | |
| łI-1 | This person is | applicant only |
| II-2 | Applicant for | all designated States except US |
| 11-4 | Name | MYKROLIS CORPORATION |
| I I -5 | Address | 129 Concord Road Billerica, MA 01821 United States of America |
| II-6 | State of nationality | US |
| 11-7 | State of residence | us |
| II-8 | Telephone No. | (978) 436-6500 |
| II-9 | Facsimile No. | (978) 436-6739 |
| 111-1 | Applicant and/or inventor | |
| III-1-1 | This person is | applicant and inventor |
| III-1-2 | Applicant for | US only |
| III-1 - 4 | Name (LAST, First) | YEN, Larry |
| III-1-5 | Address | 10 Pomeroy Road Andover, 01810 United States of America |
| III-1-6 | State of nationality | US |
| III-1-7 | State of residence | 1 |

| 111-2 | Applicant and/or inventor | |
|---------|---|---|
| 111-2-1 | This person is | applicant and inventor |
| 111-2-2 | Applicant for | US only |
| 111-2-4 | Name (LAST, First) | DUFFNER, Jay |
| 111-2-5 | Address | 169A Park Avenue |
| | | Arlington, MA 02476 |
| | | United States of America |
| III-2-6 | State of nationality | us |
| 111-2-7 | State of residence | us |
| III-3 | Applicant and/or inventor | |
| III-3-1 | This person is | applicant and inventor |
| 111-3-2 | Applicant for | US only |
| III-3-4 | Name (LAST, First) | LY, Saksatha |
| III-3-5 | Address | 154 Maple Street |
| | | Lexington, MA 02420 |
| | | United States of America |
| III-3-6 | State of nationality | us |
| III-3-7 | State of residence | us |
| IV-1 | Agent or common representative; or address for correspondence | |
| | The person identified below is hereby/ | |
| | has been appointed to act on behalf of | agent |
| | the applicant(s) before the competent International Authorities as: | |
| IV-1-1 | Name (LAST, First) | MILLED Rosmand A |
| IV-1-2 | Address | MILLER, Raymond, A. |
| | | Pepper Hamilton LLP |
| | | One Mellon Center, 50th Floor 500 Grant Street |
| | | Pittsburgh, 15219 |
| | | United States of America |
| IV-1-3 | Telephone No. | 412.454.5000 |
| IV-1-4 | Facsimile No. | 412.281.0717 |
| IV-1-5 | e-mail | docketingpgh@pepperlaw.com |
| IV-1-6 | Agent's registration No. | 42,891 |
| V | DESIGNATIONS | |
| V-1 | The filing of this request constitutes | |
| | under Rule 4.9(a), the designation of all Contracting States bound by the | |
| | PCT on the international filing date, | |
| | for the grant of every kind of | |
| | protection available and, where applicable, for the grant of both | |
| | regional and national patents. | |
| | | |

| VI-1 | Priority claim of earlier national application | |
|--------|---|---------------------------------------|
| VI-1-1 | Filing date | 27 January 2004 (27.01.2004) |
| VI-1-2 | Number | 60/539,409 |
| VI-1-3 | Country | us |
| VI-2 | Priority document request | |
| | The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s): | VI-1 |
| VII-1 | International Searching Authority Chosen | European Patent Office (EPO) (ISA/EP) |
| VIII | Declarations | Number of declarations |
| VIII-1 | Declaration as to the identity of the inventor | - |
| VIII-2 | Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent | 1 |
| VIII-3 | Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application | 1 |
| VIII-4 | Declaration of inventorship (only for the purposes of the designation of the United States of America) | - |
| VIII-5 | Declaration as to non-prejudicial disclosures or exceptions to lack of novelty | - |

| VIII-2-1 | Declaration: Entitlement to apply for and be granted a patent Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent (Rules 4.17(ii) and 51bis.1(a)(ii)), in a case where the declaration under Rule 4.17(iv) is not appropriate: | in relation to this international application |
|------------------|---|---|
| | Name (LAST, First) | MYKROLIS CORPORATION is entitled to apply for and be granted a patent by virtue of the following: |
| VIII-2-1(i v) | | an assignment from YEN, Larry to MYKROLIS CORPORATION, dated 11 January 2005 (11.01.2005) |
| VIII-2-1(i v) | | an assignment from DUFFNER, Jay to MYKROLIS CORPORATION, dated 11 January 2005 (11.01.2005) |
| VIII-2-1(i v) | | an assignment from LY, Saksatha to MYKROLIS CORPORATION, dated 11 January 2005 (11.01.2005) |
| VIII-2-1(i x) | This declaration is made for the purposes of: | all designations except the designation of the United States of America |

| • • • • • • | Declaration: Entitlement to claim priority Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier | in relation to this international application |
|------------------|---|---|
| | application specified below, where the applicant is not the applicant who filed the earlier application or where the applicant's name has changed since the filing of the earlier application (Rules 4.17(iii) and 51bis.1(a)(iii)) | |
| | Name | MYKROLIS CORPORATION |
| | | is entitled to claim priority of earlier application No. 60/539,409 by virtue of the following: |
| VIII-3-1(i v) | | an assignment from YEN, Larry to MYKROLIS CORPORATION, dated 11 January 2005 (11.01.2005) |
| VIII-3-1(i v) | | an assignment from DUFFNER, Jay to MYKROLIS CORPORATION, dated 11 January 2005 (11.01.2005) |
| VIII-3-1(i v) | | an assignment from LY, Saksatha to MYKROLIS CORPORATION, dated 11 January 2005 (11.01.2005) |
| VIII-3-1(i x) | This declaration is made for the purposes of: | all designations |

Original (for SUBMISSION)

| IX | Check list | number of sheets | electronic file(s) attached |
|-------------|--|----------------------------|-----------------------------|
| IX-1 | Request (including declaration sheets) | 6 | / |
| X-2 | Description | 16 | - |
| X-3 | Claims | 3 | - |
| X-4 | Abstract | 1 | / |
| K-5 | Drawings | 0 | - |
| K-7 | TOTAL | 26 | |
| | Accompanying Items | paper document(s) attached | electronic file(s) attached |
| K-8 | Fee calculation sheet | √ | - |
| (-17 | PCT-SAFE physical media | - | / |
| (-18 | other | Postcard Receipt | |
| (-18 | other | PCT Transmittal | |
| (-19 | Figure of the drawings which should accompany the abstract | 0 | |
| (-20 | Language of filing of the international application | English | |
| (-1 | Signature of applicant, agent or common representative | hall | |
| (-1-1 | Name | Kaymond A. Miller, Reg | . No. 42,891 |
| -1-2 | Name of signatory | Attorney | |
| (-1-3 | Capacity | // | |

FOR RECEIVING OFFICE USE ONLY

| 10-1 | Date of actual receipt of the purported international application | |
|--------|---|--------|
| 10-2 | Drawings: | |
| 10-2-1 | Received | |
| 10-2-2 | Not received | |
| 10-3 | Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application | |
| 10-4 | Date of timely receipt of the required corrections under PCT Article 11(2) | |
| 10-5 | International Searching Authority | ISA/EP |
| 10-6 | Transmittal of search copy delayed until search fee is paid | |

FOR INTERNATIONAL BUREAU USE ONLY

| Date of receipt of the record copy by the International Bureau | |
|--|--|
| | |

PCT (ANNEX - FEE CALCULATION SHEET)
Original (for SUBMISSION)
(This sheet is not part of and does not count as a sheet of the international application)

| 0 | For receiving Office use only | | | |
|--------|--|------------------------------|-------------------------------|--|
| 0-1 | International Application No. | | | |
| 0-2 | Date stamp of the receiving Office | | | |
| | | | | |
| 0-4 | Form PCT/RO/101 (Annex) | | | |
| 0-4-1 | PCT Fee Calculation Sheet Prepared Using | DOM (3.77 (7.4 | | |
| 041 | repared Using | PCT-SAFE [EASY | | |
| 0-9 | Applicant's or agent's file reference | 126457.02102 | Version 3.50 (Build 0002.163) | |
| 2 | Applicant | MYKROLIS CORPO | PATTON | |
| 12 | Calculation of prescribed fees | fee amount/muliplier | Total amounts (USD) | |
| 12-1 | Transmittal fee T | · | 300 | |
| 12-2-1 | Search fee S | <u> </u> | 1920 | |
| 12-2-2 | International search to be carried out by | EP | | |
| 12-3 | International filing fee | | | |
| | (first 30 sheets) i1 | 1134 | | |
| 12-4 | Remaining sheets | 0 | | |
| 12-5 | Additional amount (X) | | | |
| 12-6 | Total additional amount i2 | | | |
| 12-7 | i1 + i2 = 1 | 1134 | | |
| 12-12 | EASY Filing reduction R | -81 | | |
| 12-13 | Total International filing fee (i-R) | 45 | 1053 | |
| 12-14 | Fee for priority document | | 1033 | |
| | Number of priority documents requested | 1 | | |
| 12-15 | | 20 | | |
| 12-16 | Total priority document fee: P | \$ | 20 | |
| 12-17 | TOTAL FEES PAYABLE (T+S+I+P) | | | |
| | Mode of payment | cheque | \$ 3293 | |
| 2-20 | Deposit account instructions | oneque | | |
| 1 | The receiving Office | | | |
| | The resoluting Office | Office (UCDTO) | Patent and Trademark | |
| ļ. | Authorization to charge any deficiency or credit any overpayment in the total fees indicated above | Office (USPTO) (RO/US) | | |
| | Deposit account No. | E0 0426 | | |
| | Date | 50-0436 | | |
| | | 11 January 2005 (11.01.2005) | | |
| 2-23 | Name and signature | Raymond A. Mil | ler | |
| | | 1/// | | |
| 1 | | /VN/// | | |
| | | | | |

A process is provided for removing microbubbles from a liquid by filtration with a mposite porous membrane which is formed from a porous polyn membrane having an average pore size tween about 0.01 and 0.03 microns on which is directly coated a cross-linked polymer derived from N, N-methylenebisacrylamide (MBAM) optionally containing dimethylacrylamide (DMAM).